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Employment outlook in the face of population ageing

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Central banks must understand the structural drivers of economic growth to steer monetary conditions appropriately. Population ageing is an important structural driver. Since 2010, more people have retired than young people have joined the workforce, which has weighed on Swiss employment growth. In the future, this development is expected to intensify. Given the current demographic trends, population ageing may well reduce employment growth to half of its historical average. Understanding this phenomenon is key for future monetary policy, as noninflationary potential GDP growth will be affected accordingly unless other factors, such as higher productivity growth, compensate for it.

Like other economies, Switzerland is facing significant demographic change. The largest age cohorts are approaching retirement. On the basis of the current age structure, approximately 400,000 more people are expected to leave the workforce than young people joining it over the next ten years. This development has important implications for future employment growth.

Ageing has markedly affected the working-age population

The age structure of the Swiss permanent resident population, hereafter referred to as the population, has changed significantly over the past four decades. In 1980, 19% of the population was below working age (i.e. younger than 15 years old), whereas only 14% was above it (i.e. 65 years old or older). By 2023, the share of the population below working age had declined to 15%, whereas the share above working age had increased to 19%.

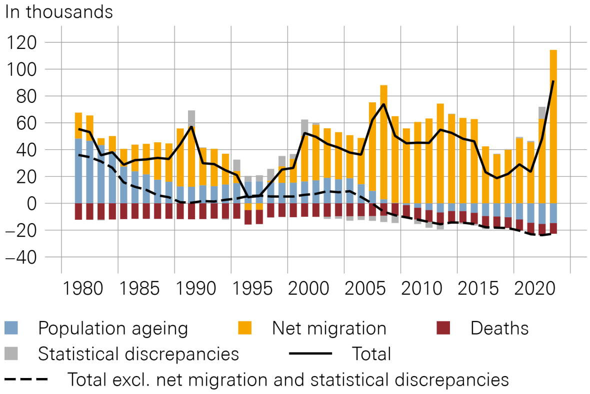
Population ageing expanded the working-age (15–64 years) population in the past, but its impact has since reversed. In the 1980s, the number of people reaching working age was substantially larger than the number of people turning 65. This positive contribution to the growth of the working-age population then declined over time (cf. blue bars in Chart 1) and reversed in 2010, when the number of people reaching retirement age began to exceed the number of young people reaching working age. Since then, the difference between these two age groups has increased and reached 15,000 in 2023. Accounting for 8,000 deaths of working-age persons (red bars in Chart 1), the working-age population would have actually shrunk by 23,000 in 2023 without migration (black dashed line in Chart 1).

Over the past few decades, net migration into the permanent resident population[1], hereafter referred to as net migration (cf. orange bars in Chart 1), has become the main contributor to the growth of the working-age population. It accounted for approximately half of the growth in the 1980s and 75% in the 1990s and early 2000s. The contribution of net migration has become even more pronounced since 2007, when the Agreement on the Free Movement of Persons with the EU entered full effect. Since 2010, net migration has been the only positive contributor to working-age population growth. On average, it has increased population in this age group by 60,000 per year since 2010.[2]

Net migration has not only increased the size of the working-age population but also had a rejuvenating impact because mostly young people immigrated. To reveal the impact of migration on the age structure over the past 15 years, Chart 2 compares the age distribution in 2023 (black line) with the distribution that would have resulted if the 2008 population had simply aged by 15 years (blue bars). The differences between these two distributions are due to either net migration or births and deaths. As shown in Chart 2, net migration (orange bars) has especially taken place into the working-age population. For example, of the 133,000 persons aged 35 in 2023, 93,000 were already in Switzerland in 2008, whereas the remaining 40,000 immigrated in the past 15 years. In contrast, net migration even had a slightly negative effect on the cohorts older than 61, i.e. more old people emigrated than immigrated.

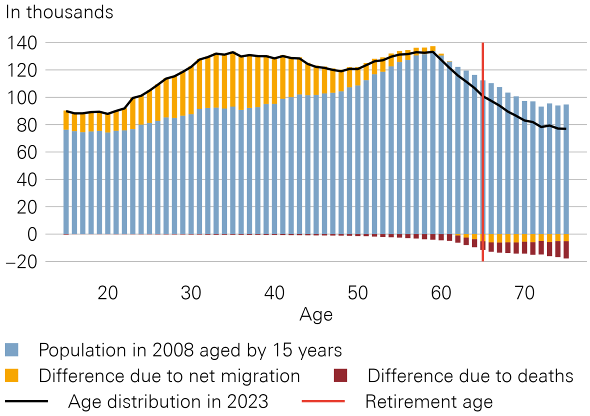
CHART 1: WORKING-AGE POPULATION GROWTH

Permanent residents, annual change



Sources: SFSO, SNB

CHART 2: AGE DISTRIBUTION IN 2023



Sources: SFSO, SNB

[1] The permanent resident population includes all Swiss nationals having their main place of residence in Switzerland and foreign nationals who have held a residence or permanent residence permit for a minimum of 12 months. Persons with a shorter residency permit or cross-border workers are excluded from this definition.

[2] The record-high net migration in 2023 was partly because a large fraction of the Ukrainian refugees, who had fled to Switzerland in 2022, became part of the permanent resident population in 2023.

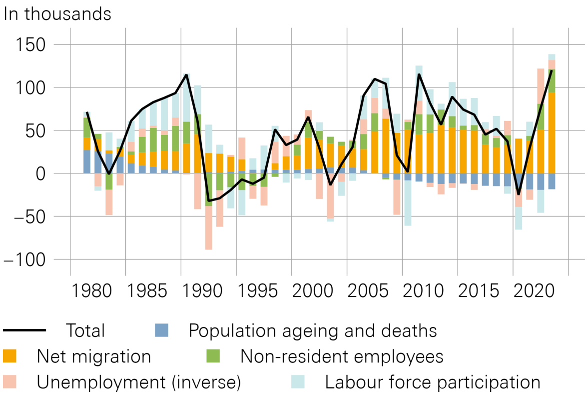
Changes in working-age cohorts have contributed to employment growth

Like the working-age population, employment in Switzerland has increased significantly since the 1980s. Growth in the number of employed persons has generally been positive but has fluctuated considerably in line with economic cycles (cf. black line in Chart 3).

The evolution of the working-age population has played a key role in enabling employment growth. Chart 3 decomposes the growth in the number of employed persons into contributions of the working-age population (i.e. ageing and deaths, blue bars, and net migration, orange bars), labour force participation (bright blue bars), unemployment (bright red bars), and non-resident employees (i.e. cross-border commuters and other employees without a permanent residency permit, green bars).[3] Each of these factors has significantly influenced employment dynamics, although their relative importance has varied over time. Population ageing supported employment growth in the 1980s but has constrained it since 2008. Domestic labour force participation increased substantially between the mid-1980s and the early 1990s, and then again between 2006 and 2018 (cf. Chart 4). This increase was mostly due to more women entering the labour market. Changes in the number of non-resident employees have also played an important role and were quite cyclical. Moreover, the contribution of net migration has significantly increased since the early 2000s. Finally, changes in unemployment mainly reflect cyclical fluctuations in labour demand that had overall offsetting effects.

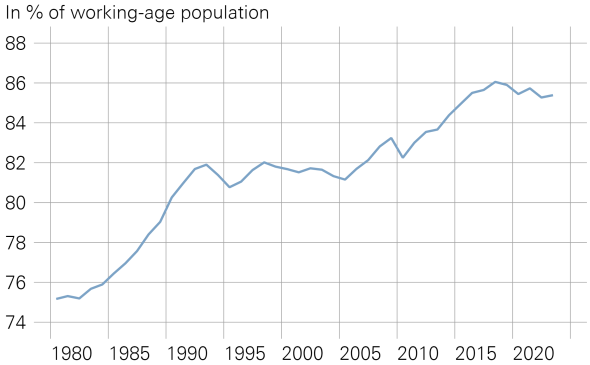
CHART 3: EMPLOYMENT GROWTH

Number of employees, annual change



Sources: SECO, SFSO, SNB

CHART 4: LABOUR FORCE PARTICIPATION RATE



The labour force is calculated as the number of unemployed plus the number of employed persons with a permanent residency permit.

Sources: SECO, SFSO, SNB

Population ageing will more strongly impact future employment growth

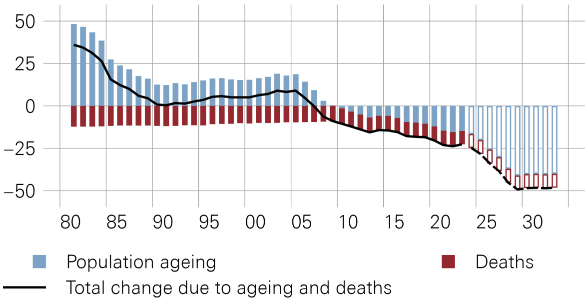
The most populous cohorts of the population will reach retirement age soon, widening the difference between people retiring and young people entering the workforce. Thus, population ageing will weigh more strongly on future employment growth. To illustrate this, Chart 5 shows the implications of the current age structure for future working-age population growth. From 2029 onwards, the working-age population would decline by almost 50,000 per year (cf.

[3] To calculate these contributions, we rely on economy-wide quantities and do not account for differences in, for example, employment rates by age, nationality or gender. Accounting for these differences could alter the calculated contributions.

black dashed line). This would in turn reduce the number of employees by approximately 40,000 per year (cf. empty blue bars in Chart 6), assuming that the share of employees in the working-age population remains unchanged.

CHART 5: IMPACT OF POPULATION AGEING AND DEATHS ON WORKING-AGE POPULATION GROWTH

Permanent residents, annual change

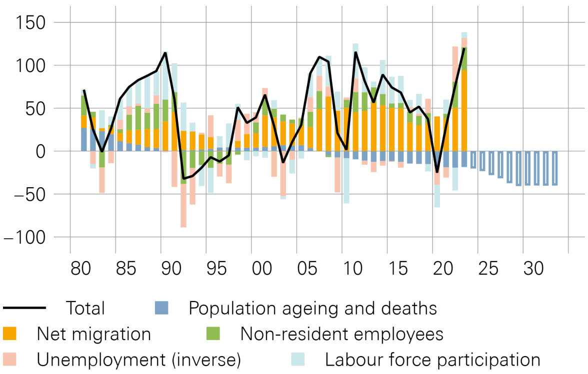


The empty bars show future contributions implied by the current population structure and recent number of deaths.

Sources: SFSO, SNB

CHART 6: EMPLOYMENT GROWTH

Number of employees, annual change



Sources: SECO, SFSO, SNB

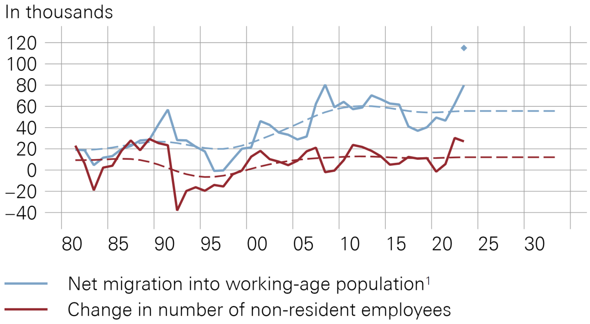
To assess the employment outlook in the face of population ageing, we consider a scenario in which current trends in labour force participation, unemployment, net migration and non-resident employment continue over the next ten years.[4] In this "continued-trend scenario", the labour force participation rate would rise from the current 85.4% to 86.6% by 2033, whereas the unemployment rate would remain broadly unchanged. Annual net migration would amount to 56,000 (cf. blue dashed line in Chart 7). Similarly, the number of employed people without permanent residency would increase by 11,000 per year (red dashed line in Chart 7).

In this scenario, population ageing will slow employment growth to approximately half of its historical average (computed over the period 1980 to 2023). This is illustrated in Chart 8. The dashed line depicts annual employment growth according to the continued-trend scenario, and the empty bars show its composition. For comparison, average historical employment growth is shown by the dotted line. Without population ageing, the continued-trend scenario implies employment growth similar to the historical average (i.e. the sum of all but the blue empty bars are close to the dotted line). However, the impact of ageing (blue empty bars) pushes employment growth in the scenario (dashed line) significantly below it. Consequently, employment grows cumulatively by 310,000 persons over the next ten years in the continued-trend scenario, which is approximately half of the 670,000 implied by employment growth according to the historical average.

[4] We compute the current trends using a Hodrick-Prescott filter and then linearly extrapolate them into the future.

CHART 7: NET MIGRATION AND NON-RESIDENT EMPLOYEES

Dashed lines: extended HP-filter trends

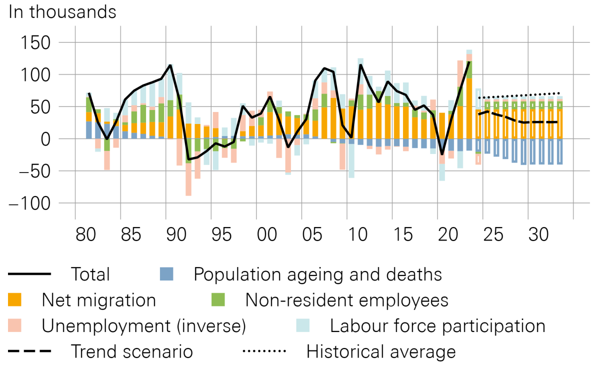


¹ Excluding Ukrainian refugees, which became part of the permanent resident population in 2023; the diamond indicates net migration including them.

Sources: SFSO, SNB

CHART 8: EMPLOYMENT GROWTH

Number of employees, annual change



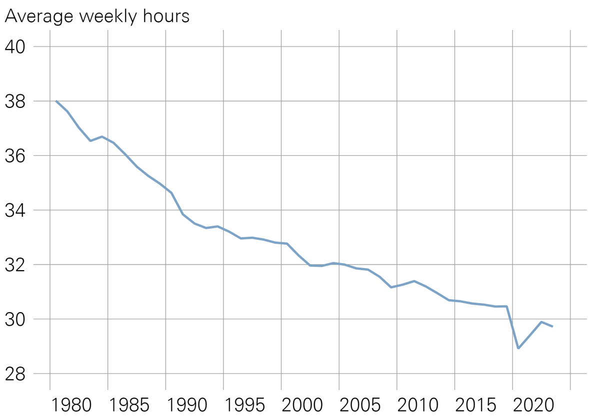
The empty bars show future contributions according to the continued-trend scenario.

Sources: SECO, SFSO, SNB

Of course, the decline in employment growth due to population ageing could be partially offset by a larger increase in labour force participation, a larger decline in unemployment, higher net migration, more non-resident employees, or an increase in retirement age. However, the large gap between the dashed and the dotted lines in Chart 8 indicates that these contributors to employment growth would need to deviate significantly from their current trends to fully offset the dampening impact of population ageing.

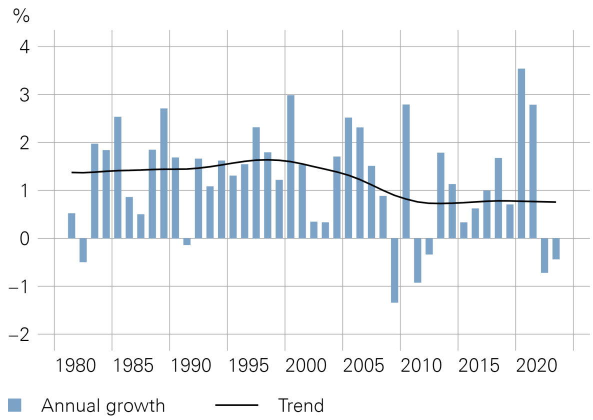
Alternatively, the ageing-induced decline in employment growth could be offset by higher average hours worked per employee. However, this would require a trend reversal, as average hours worked per employee have steadily declined over the last decades (cf. Chart 9).[5]

CHART 9: HOURS WORKED PER EMPLOYEE



Sources: SFSO, SNB

CHART 10: REAL LABOUR PRODUCTIVITY



Sources: SECO, SFSO, SNB

5 A shift-share analysis suggests that approximately one quarter of the decline since 1980 was due to the increase in part-time work, while the remainder results from the general decline in hours worked at each employment level (e.g. from 46 to 42 hours for a full-time job). In contrast to average hours worked per employed person, hours worked per capita of working age have declined much less since the 1980s and have remained broadly stable since the turn of the millennium. In other words, the rise in labour force participation has more or less offset the decline in average hours worked per employed person since 2000.

The ageing-induced decline in employment growth will, all else equal, weigh on overall economic activity. A reacceleration of aggregate labour productivity growth to the trend before the financial crisis (cf. Chart 10) could offset this effect. While technological advancements, such as artificial intelligence, might lead to such an improvement, an older population is generally associated with lower productivity growth.[6]

Overall, population ageing is likely to weigh significantly on employment growth over the next ten years. If current trends continue, employment growth may well slow to half of its historical average. To instead match the historical average, labour force participation, unemployment, net migration or inflows of non-resident employees would need to deviate significantly from their current trends. While employment growth will likely be lower, the dampening impact on economic activity could be offset if labour productivity growth reaccelerates to its trend before the financial crisis.

All these factors will impact the domestic labour market, the structure of the Swiss economy and noninflationary potential GDP growth. They are thus highly relevant from a monetary policy perspective and will have to be monitored closely by the SNB.

[6] See Feyrer (2007) or Maestas et al. (2023). For a counterexample, see Acemoglu and Restrepo (2017).

References

Acemoglu, D., and P. Restrepo (2017), Secular stagnation? The effect of aging on economic growth in the age of automation, *American Economic Review*, 107(5), pp. 174–179.

Feyrer, J. (2007), Demographics and productivity, *The Review of Economics and Statistics*, 89(1), pp. 100–109.

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